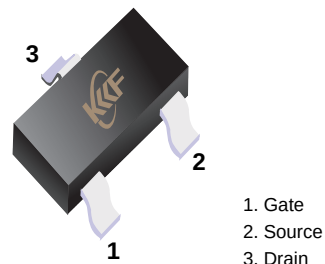


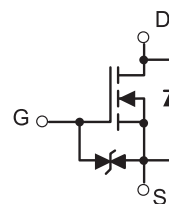
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■ N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60 V	5Ω@10V	340mA
	5.3Ω@4.5V	



■ Simplified outline(SOT-523)



■ Features

- High density cell design for Low $R_{DS(on)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

■ Application

- Load Switch for Portable Devices
- DC/DC Converter

■ Absolute Maximum Ratings $T_a=25^{\circ}C$

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current	340	mA
I_{DM}	Pulsed Drain Current(note1)	800	mA
P_D	Power Dissipation	0.15	W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	°C/W

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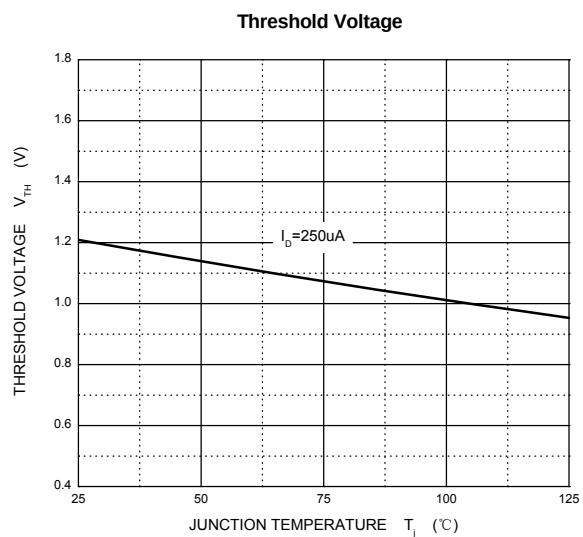
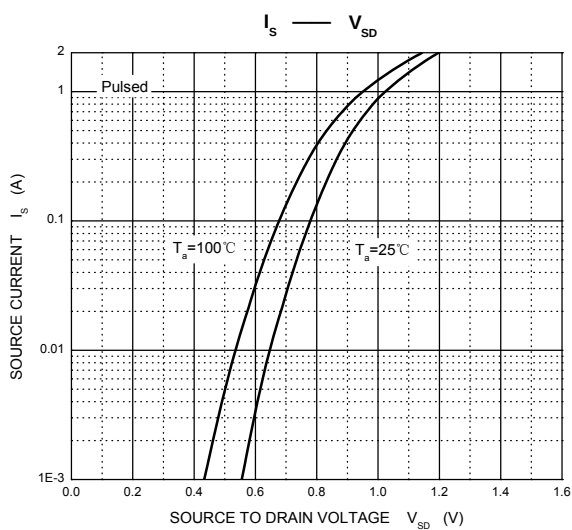
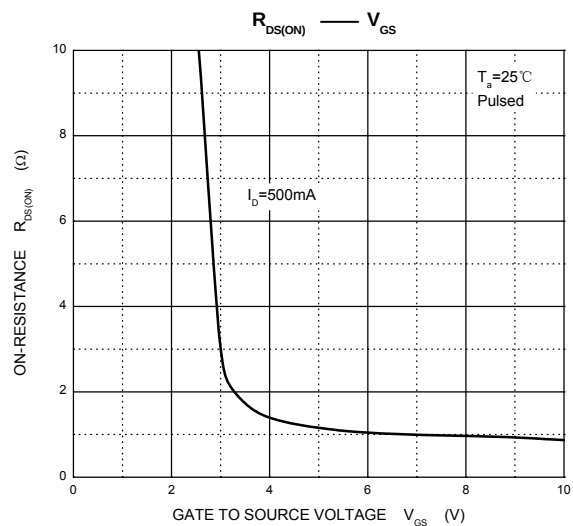
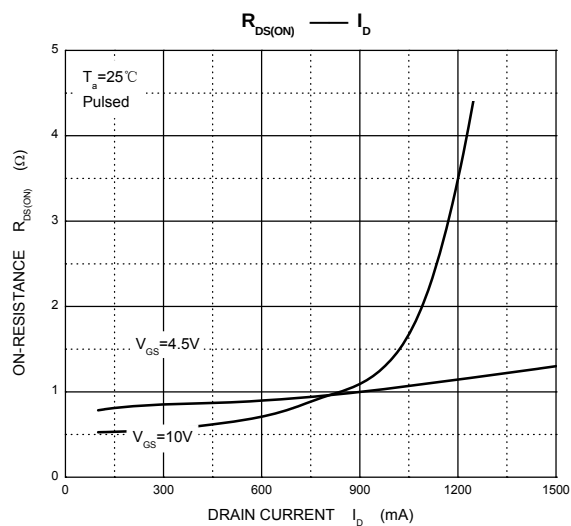
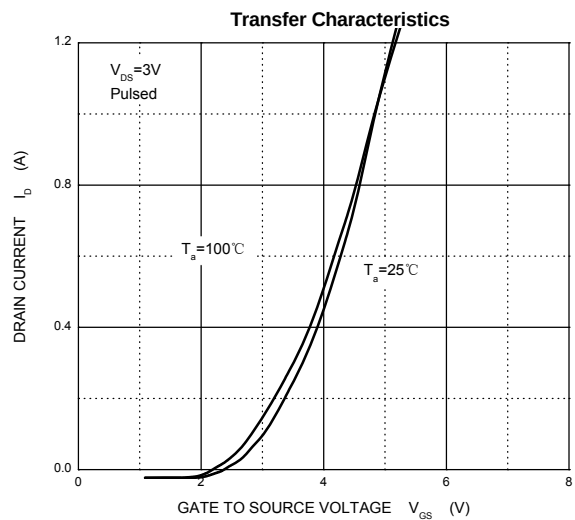
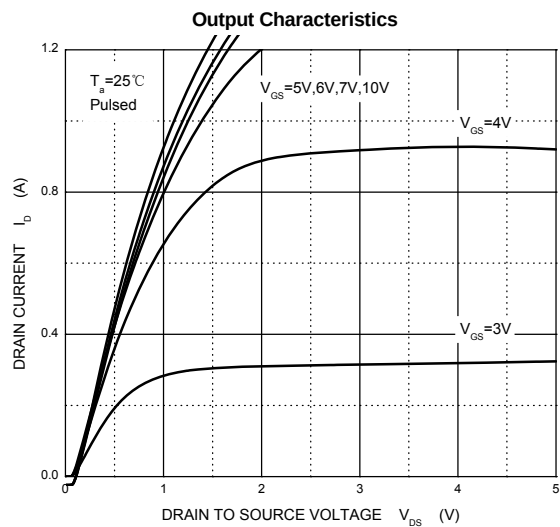
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source Breakdown Voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D =250μA	60			V
GateThreshold Voltage (note 2)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =1mA	1	1.3	2.5	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =48V, V _{GS} = 0V			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V			±10	μA
Drain-Source On-Resistance (note 2)	R _{DS(on)}	V _{GS} =4.5V, I _D =200mA		1.1	5.3	Ω
		V _{GS} =10V, I _D =500mA		0.9	5	Ω
DYNAMIC PARAMETERS (note 3)						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f =1MHz			40	pF
Output Capacitance	C _{oss}				30	pF
Reverse Transfer Capacitance	C _{rss}				10	pF
SWITCHING PARAMETERS(note 3)						
Turn-on Delay Time	t _{d(on)}	V _{GS} =10V, V _{DD} =50V, R _G =50Ω			10	ns
Turn-off Delay Time	t _{d(off)}	R _{GS} =50Ω, R _L =250Ω			15	ns
Reverse Recovery Time	t _{rr}	V _{GS} =0V, I _S =300mA, V _R =25V, dI _S /dt=-100A/us		30		ns
Recovered Charge	Q _r	V _{GS} =0V, I _S =300mA, V _R =25V dI _S /dt=-100A/us		30		nC
GATE-SOURCE ZENER DIODE						
Gate-Source Breakdown Voltage	BV _{GSO}	I _{gs} = ± 1mA(Open Drain)	± 21.5		± 30	V
DRAIN-SOURCE DIODE						
Diode Forward Voltage(note 2)	V _{SD}	I _S =300mA, V _{GS} = 0V			1.5	V
Continuous Diode Forward Current	I _S				0.2	A
Pulsed Diode Forward Current(note1)	I _{SM}				0.53	A

Notes :

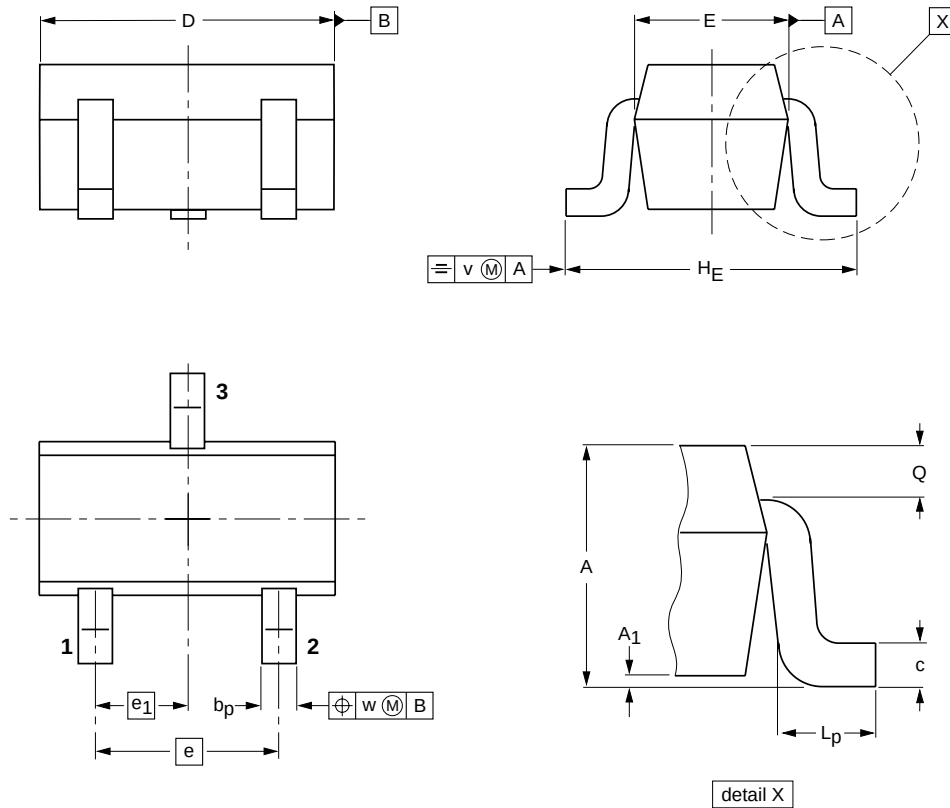
1. Repetitive rating: Pluse width limited by junction temperature.
2. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
3. Guaranteed by design, not subject to production testing.

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■ SOT-523



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	0.95 0.60	0.1	0.30 0.15	0.25 0.10	1.8 1.4	0.9 0.7	1	0.5	1.75 1.45	0.45 0.15	0.23 0.13	0.2	0.2